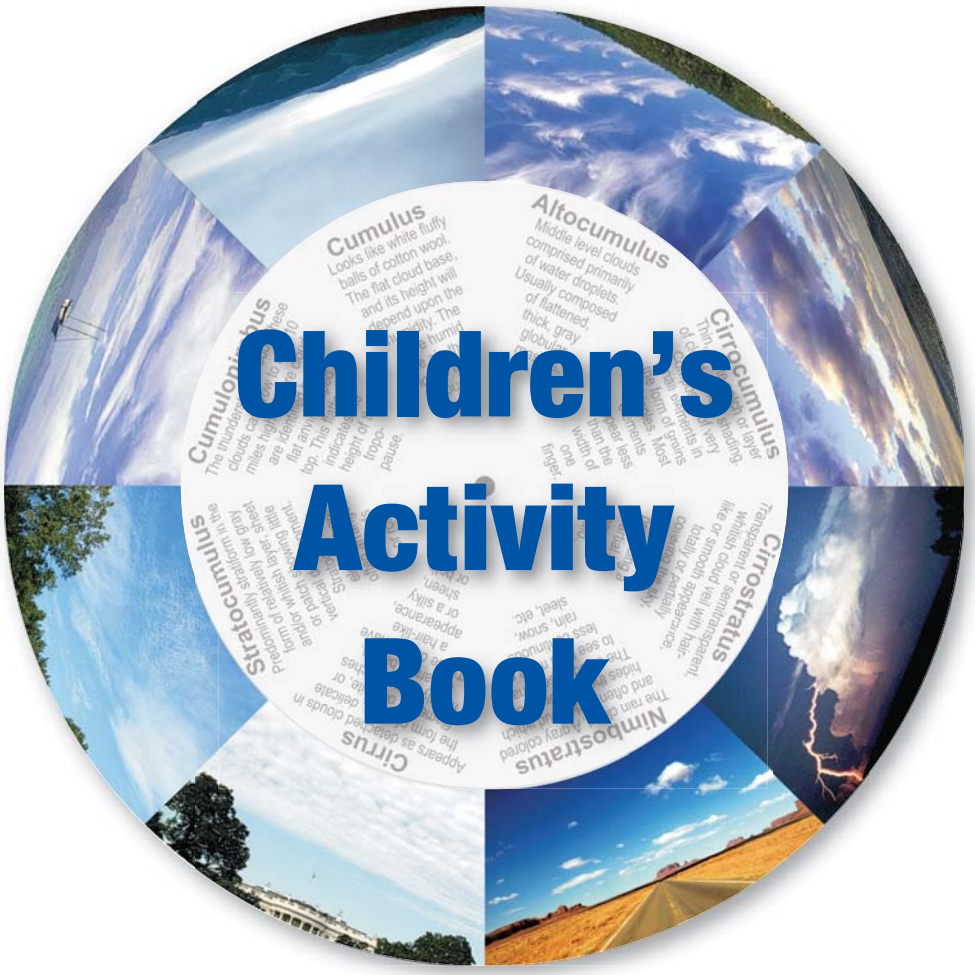
NATIONAL
Weather Festival

NOVEMBER 4, 2006



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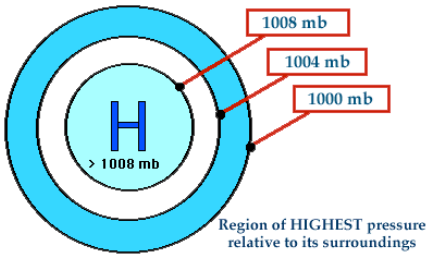
Jefferson Middle School, Oklahoma City Public School, Oklahoma City, Oklahoma

The Highs and Lows of Isobars

By Mary Hynes
Grade - Eighth
Subject - Science



High and Low pressure systems are large scale features that move weather systems around the globe. Using an upper air chart for 500 mb, create a vertical puzzle of the pressure values.

Materials and Equipment Needed

Adult supervision

3 Sheets of Foam Board

Several copies of a 500 mb map from the National Weather Service web site

Exacto Knife

Glue Sticks

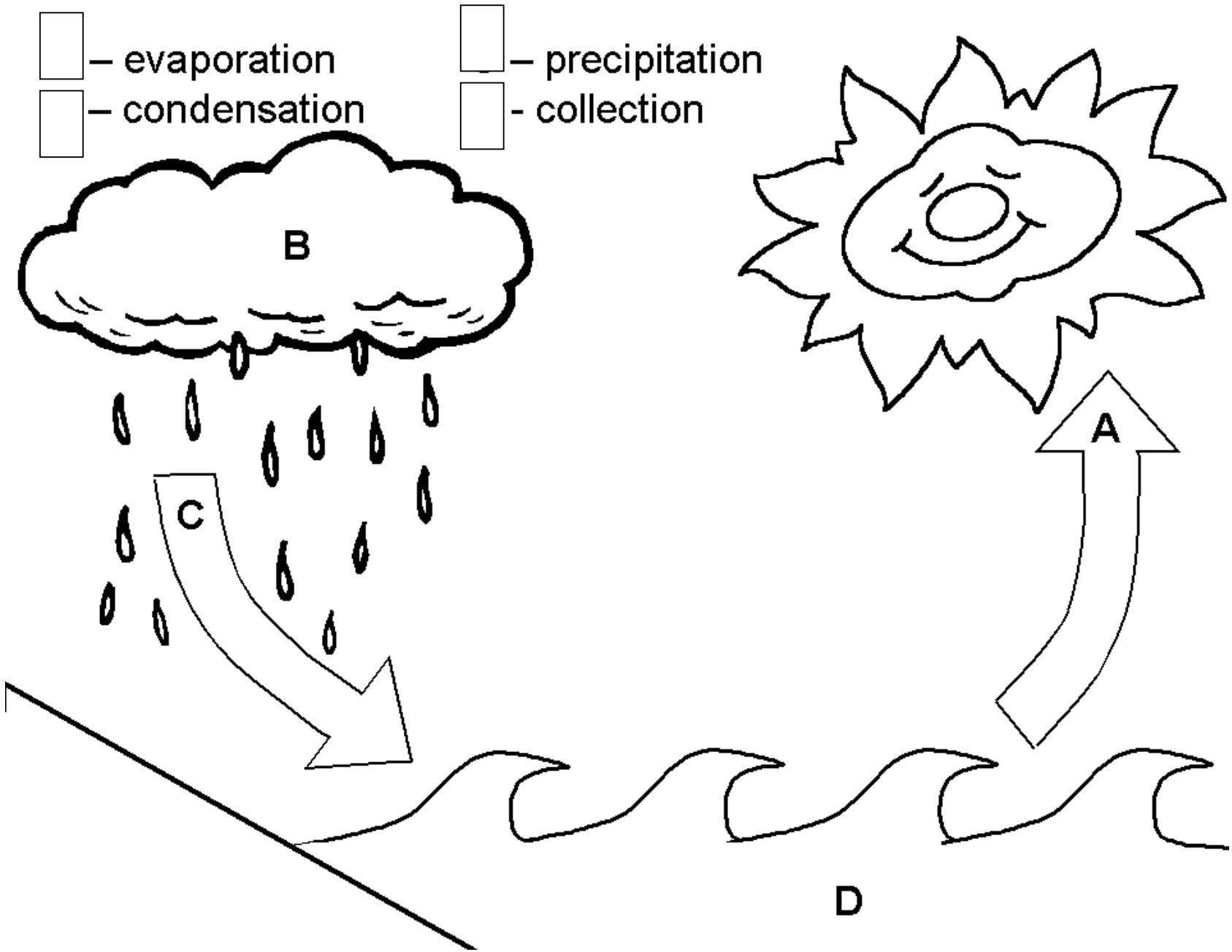
Instructions

- Watch the 500 mb chart for several weeks. Look for a low or high pressure system. On the 500 mb chart you will find several isobars (lines of constant pressure) forming a circle. For a high pressure system, the value of the contour lines will increase as you move from the outside of the circle to the inside. The opposite is true for low pressure systems (the smaller number will be in the center).
- Make several copies of your 500 mb chart.
- Take one copy of the chart and cut along an isobar. For example, cut along the 5700 isobar.
- For each copy of the 500 mb chart, cut along a different.
- Glue the shapes on to pieces of foam board.
- Use the Exacto knife to cut around the foam board shapes.
- Have students stack their isobar shapes to build a 3-D model to learn how the winds move around pressure systems.
- If you chose a 500 mb chart with a high pressure system, repeat the process for a low pressure system.

The Hydrologic Cycle also known as The Water Cycle
Where does the water go?

You are a water molecule that is about to take a journey through the water cycle. Select a station on the game board as your starting point for this activity. Fill in the name of the station on line 1 below. Fill in the state of mater (ice, liquid, or vapor) in which water is found at this station. Roll the block. Record the name of the station on the block. You may be required to remain at your current station. Go ahead and list the station name on the next line. In the space labeled "Process" describe what happened to the water for it to move to the station listed on the block. Move to the new station on the game board and repeat the process. You have 5 minutes to roll 10 times. Draw a picture to show how your water molecule changed as it moved through the water cycle.

	Station Name	**State of Matter**	**Process**	**Next Station**
1.	Start _____	_____	_____	_____
2.	_____	_____	_____	_____
3.	_____	_____	_____	_____
4.	_____	_____	_____	_____
5.	_____	_____	_____	_____
6.	_____	_____	_____	_____
7.	_____	_____	_____	_____
8.	_____	_____	_____	_____
9.	_____	_____	_____	_____
10.	_____			End_____


– evaporation
– condensation
– precipitation
- collection
B
A
C
D

Pop-up Groundhog Puppet

Make this adorable groundhog puppet to use while reading your favorite picture book about Groundhog's Day.

Materials and Equipment Needed

Paper cup (3 oz bath cups)

Brown construction paper

Craft stick

Googly eyes

Crayons, markers or paint

Glue

Scissors

Instructions

- Cut two circles or ovals from the brown construction paper. One shape should be larger.
- Glue the two pieces onto a craft stick. The small shape is the head and the large shape is the body of the groundhog.
- Glue the googly eyes onto the head of your groundhog.
- Make a small slit in the bottom of the paper cup.
- Decorate the paper cup with markers, crayons or paint.
- Insert the bottom of the popsicle stick into the hole so that your groundhog fits inside your cup.
- Push the craft stick up from the bottom to make your groundhog appear.

Here's a Little Groundhog

Here's a little groundhog furry and brown

He's coming up to look around.

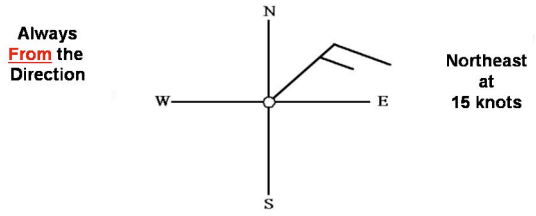
If he sees his shadow, down he'll go

Then six more weeks of winter, OH NO!

Monroe Elementary, Enid Public School, Enid, Oklahoma

Wind Direction to What Degree?

By Lori Painter
Grade - Sixth
Subject - Science



The wind direction represents the direction from which the wind is blowing. For example, when the wind is 180 degrees (south), the wind is blowing from the south toward the north. Meteorologist use the wind direction to forecast the weather. More importantly, the wind direction aids meteorologist by helping them determine the characteristics of the air headed in our direction. For example, a south wind in Oklahoma would tend to make it more humid, while north winds bring cold air to our state.

Materials and Equipment Needed

Colored Pencils

Mesonet Map

Internet
http://earthstorm.ocs.ou.edu/
http://www.mesonet.org/public/

WeatherScope Software
http://www.ocs.ou.edu/software/

Instructions

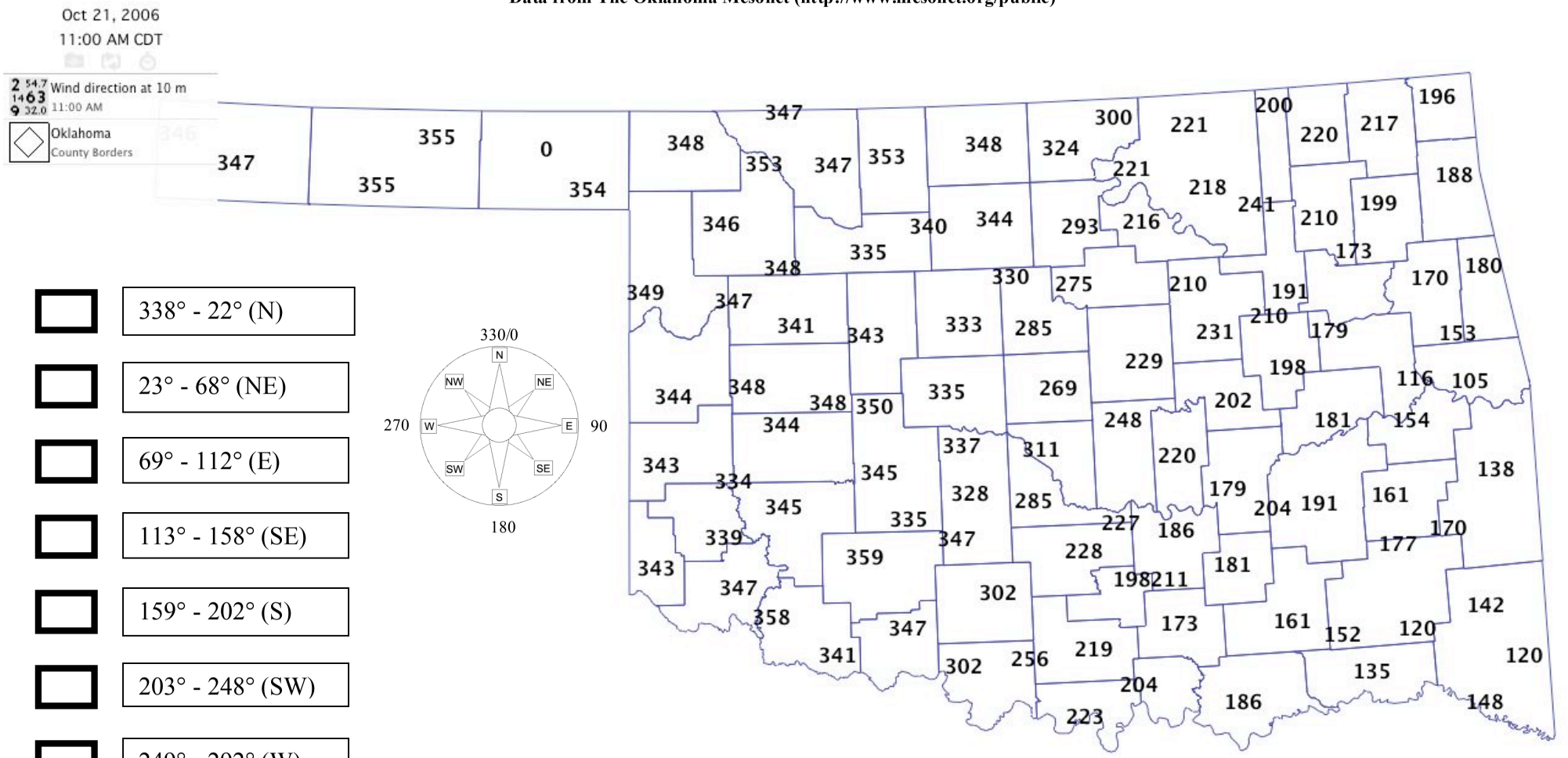
- Color each wind direction a different color on the map key
- Color the wind direction at each station on the Mesonet map using the wind direction key.
- Have students locate wind that would bring cold air to the state.
- Have students locate winds that would bring warm air to the state.
- Have students locate winds that would bring moisture into the state.
- Using the Mesonet website have student identify current wind direction in their area.

Comments or Assessments

Have students download a wind direction Mesonet map from the Internet when a cold front is moving through the state. Next, download a temperature map for the same time and compare what is occurring as the wind changes from a south wind to a north wind. Using prediction skills have students track the front using Mesonet maps every 30 minutes. Predict what will occur in the following 30 minutes. Students can check their prediction using the Mesonet maps which are updated every five minutes. This is a great way to assess the knowledge and skills the students have achieved. Students can make their own maps by using WeatherScope Software obtained at http://www.ocs.ou.edu/software/.

Wind Direction

Data from The Oklahoma Mesonet (http://www.mesonet.org/public)



☐	338° - 22° (N)
☐	23° - 68° (NE)
☐	69° - 112° (E)
☐	113° - 158° (SE)
☐	159° - 202° (S)
☐	203° - 248° (SW)
☐	249° - 292° (W)
☐	293° - 337° (NW)

1. Create your color key. Color each box above with a different color.
2. Using your color key, shade the map of Oklahoma based on the wind direction values provided.
   For example, 344° is between 338° and 22° so it is a North wind. 210° is a SW (southwest) wind.

Cloudy With A Chance of Meatballs Word Search

C C I U B I J B O G E X H R T
W H L H U E Q R C D H E E L K
F O E O I M I E B D A N L G W
B U N W U H N A Y N N N V G H
Q P U S A D Y K G I B X R U C
I N R T D N S F D W G J R O I
M B H R L Z D A N I A R P E T
R E H T A E W S Z H I H S L F
R R E P O R T T W C Q T C Z I
Q Y L F O G V L A A O V L Z P
R V U F Z U A N L R L D V I K
C C N N D S E A M Q F L L R H
T G C K J D T G Z Z J B O D U
Y P H J C Q T K W V X W Y W N
M P Q H V Q K H B T A W F U R

BREAKFAST
CHEWANDSWALLOW
CLOUDS
DINNER
DRIZZLE
FOG
HURRICANE
LUNCH
RAIN
REPORT
SKY
SNOW
STORM
TORNADO
WEATHER
WIND

Cloud Observing Form

Name:________________________________ Location:____________________________________

Date	Time	Cloud type(s)	Remarks
	AM PM	High cloud: Mid-level cloud: Low-level cloud:	
	AM PM	High cloud: Mid-level cloud: Low-level cloud:	
	AM PM	High cloud: Mid-level cloud: Low-level cloud:	
	AM PM	High cloud: Mid-level cloud: Low-level cloud:	
	AM PM	High cloud: Mid-level cloud: Low-level cloud:	
	AM PM	High cloud: Mid-level cloud: Low-level cloud:	
	AM PM	High cloud: Mid-level cloud: Low-level cloud:	
	AM PM	High cloud: Mid-level cloud: Low-level cloud:	

National Weather Service

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We hope you enjoyed the
National Weather Festival.
Join us again in 2007.

Send comments to
andrea@mesonet.org